

FIVE SERICINE BEETLES¹

BY ROBERT J. SIM

CHIEF ILLUSTRATOR, DIVISION OF JAPANESE AND ASIATIC BEETLE RESEARCH,
U. S. BUREAU OF ENTOMOLOGY

Two oriental species of sericine beetle (family *Scarabaeidae*) have become established in the eastern part of the United States. These superficially resemble certain native American beetles, and one of them is similar in appearance to a common *Serica* of Europe. With these facts in view, it seems advisable to prepare a brief illustrated paper which may enable beetle students to distinguish easily insects which have been frequently misidentified. Instead of befogging the subject with a complete and minute description of each species, I shall attempt to make identifications possible by pointing out the prominent distinctive characters in each. It should be emphasized that, while these beetles bear external resemblances to one another, the male genitalia are quite different and should be examined in all careful determinations.

Of the more than forty named species of *Serica*, the smallest (*S. trogiformis* Uhler) is about 0.20 inch (5.08 mm.) long; one of the largest (*S. fimbriata* Lec.) is 0.40 inch (10.16 mm.) or more in length. The majority are medium-sized. Numerous species common in various localities, east and west, are still unnamed.

In form the sericines are oval or oblong in outline as seen from above. The pronotum appears short in relation to the length of the elytra. As viewed from the side, the beetles are thick and are noticeably convex above. The hind femora are thin but wide, as is frequent with insects which progress by leaps. The sericines, however, while nervous and jerky when disturbed, are not to be classed with the true jumpers, such as flea-beetles, grasshoppers, etc. In colors the species range from light yellowish-brown to deep browns and black. Some are shining above while others

¹ Contribution No. 99, Japanese Beetle Laboratory, Moorestown, N. J.

are opaque and velvety in appearance, or even more or less iridescent. In all, the elytra have numerous longitudinal sunken lines rather evenly spaced and marked with small punctures. Most of the species are crepuscular or nocturnal, but a few are active during the daytime.

Beetles of the genus *Diplotaxis* are somewhat similar in form and habits but are less convex, lack the evenly spaced elytral striae, and have less noticeably expanded hind femora.

The present paper discusses five sericines: two native species of *Serica*, one which has been introduced from the Orient, one common in Europe, and one *Autoserica* introduced from the Far East.

THREE DARK SPECIES

1. *Serica sericea* Ill.

Range: United States and Canada.

Length: 0.38 inch (9.65 mm.). Form ovate-oblong.

Color above: blackish-brown; elytra opaque, in clean, matured specimens with a decided iridescent (changeable) sheen. Prothorax sometimes shining.

Elytral striation pronounced.

Clypeus gently convex but with a narrow transverse submarginal concavity. Clypeal suture strongly arched, subangulate at middle. Clypeus and frons each anteriorly with a transverse row of fine, dark, inconspicuous setae.

This is our largest dark *Serica*. Light (*i.e.*, teneral) specimens might be mistaken for *Autoserica castanea*, but the head characters are sufficiently different.

2. *Autoserica castanea* Arr.

Introduced from the Orient. Range in America, Eastern States.

Length: 0.35 inch (8.89.). Form ovate.

Color above: dull chestnut brown, somewhat opaque and with a faint iridescence.

Elytral striation less pronounced than in *S. sericea*.

Clypeus with a median longitudinal convexity reaching anterior reflexed margin. Clypeal suture arcuate,

scarcely subangulate at middle. A few conspicuous, yellowish, erect setae in an irregular transverse patch at middle of frons.

More robust than *S. sericea*. Never blackish. The vaguely roof-like longitudinal ridge of the clypeus and the rather coarse pale hairs on the forehead distinguish this species. Frequently found in immense numbers in gardens and nurseries of the New York and Philadelphia districts and becoming abundant elsewhere.

3. *Serica parallela* Csy.

Range: Eastern, Atlantic and Middle States.

Length: 0.32 inch (8.13.). Form oblong.

Color above: bright chestnut brown, opaque, sometimes faintly iridescent.

Elytral striation similar to that of *S. sericea*.

Clypeus with a roundish central convexity and scattered inconspicuous dark setae. Suture strongly arched, subangulate at middle.

Frons anteriorly with an irregular row of dark inconspicuous setae.

Like a small teneral specimen of *S. sericea*, but with sides more nearly parallel (not expanding posteriorly) and slight, when any, iridescent sheen. Common in pine-oak regions of the Atlantic States.

TWO LIGHT SPECIES

1. *Serica similis* Lewis

Introduced from the Orient. Range in America, parts of Long Island.

Length: 0.32 inch (8.13 mm.). Form elongate. Prothorax noticeably short, with sides not strongly arcuate near apical angles.

Color above: yellowish-brown, opaque throughout. No iridescent sheen.

Elytral striation rather pronounced.

Clypeus with median convexity more evident than in *S. brunnea* but not roof-like as in *A. castanea*. Suture

strongly arched, subangulate. Setae very few, dark and inconspicuous.

The distinctly arched clypeal suture and the shorter pronotum with less arcuate sides differentiate this introduced species from *S. brunnea*, of Europe, which it generally most resembles. The male genitalia of these two beetles are utterly dissimilar and, as in all sericines, should be examined in any doubtful specimen.

2. *Serica brunnea* L.

Range: Europe. Not yet found in America.

Length: 0.32 inch (8.13 mm.). Form elongate. Prothorax with sides usually distinctly arcuate anteriorly.

Color above: rufous to yellowish-brown. Somewhat opaque.

Elytra with a scarcely perceptible iridescent sheen.

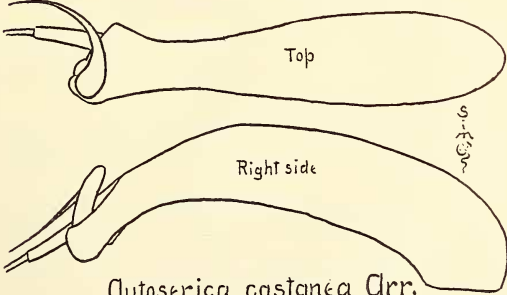
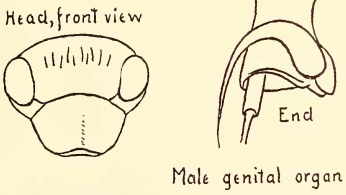
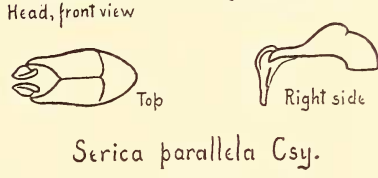
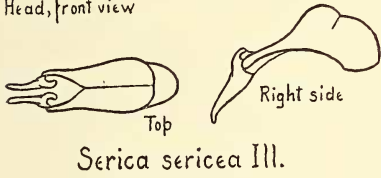
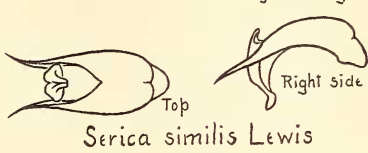
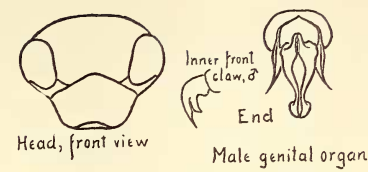
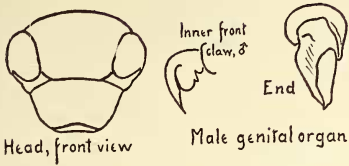
Elytral striation not very pronounced.

Clypeus vaguely convex. Suture nearly straight. Setae few, dark and inconspicuous.

This foreign species might be confused with *S. similis*, but the almost straight clypeal suture and slightly darker color should serve to distinguish it. The pronotum is a little less shortened and its lateral outlines more curved. Specimens examined are from Sweden, England, France, Germany, and Austria.

Dr. E. A. Chapin has called my attention to the claw characters in the males of *brunnea* and *similis*. In the European species (*brunnea*) the tooth of the inner claw on the fore-foot has a noticeable rounded expansion, while in *similis* this tooth is of the usual obliquely truncate type. These clay characters are shown in the accompanying plate of sketches.

It was reported by Charles Schaeffer last year that several specimens of *S. brunnea* were collected at Flushing, Long Island (Bulletin of the Brooklyn Entomological Society, Vol. XXVI, Oct., 1931); but subsequently these were found to be *S. similis*, and Mr. Schaeffer has written me that this record is being corrected in a later issue of the same publication.



Autoserica castanea Arr.
SERICINE BEETLES